Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

ART. III.—1. *Exploration of the Country between the Missouri and Platte Rivers, &c. In a Topographical Survey, by* LIEUT. G. K. WARREN. Washington. 1857.
2. *An Historical Sketch and Business Review of the City of Leavenworth, Kanzas Territory, &c.* By A. G. HAWES. Leavenworth. 1857.

NEBRASKA and Kanzas, as given to us by the recent government surveys, may be divided into three main sections. The first of these comprises the bottom-lands on the rivers, and the arable prairies that rise up from them. The second consists of the Bad Lands, or the *Mauvaises Terres* of the French trappers. Back of the latter, seamed by volcanic fissures, and desolated by sheets of fossil deposit, are spread out vast rainless plains, sometimes, though rarely, broken by streams of water, yet usually covered by a short grass, sufficient for the ordinary purposes of pasturage. How far these plains can be made to support any but a nomadic population, is a question which has lately begun to command no small degree of curiosity on the part of emigrants. It is, in fact, a momentous question; for by it is to be decided whether American emigration in the Missouri Valley has now reached its extreme western boundary, or whether it is to go on, occupying and organizing new States, until it meets the base of the Rocky Mountains. The weight of authority now seems to be, that, when the Bad Lands are reached, a final barrier is interposed to the establishment of large agricultural, mercantile, or even pastoral communities. This conclusion rests on the following reasons.

1. *The insufficiency of water.* The central plains are not only generally rainless, but this rainlessness results from a necessity of their position. Rain, as is well known, is produced by the condensation which ensues when two volumes of atmosphere of different temperatures, and of unlike degrees of moisture, come in contact with each other. The moist and hot air of the equator, moving in the current of the trade-winds from the south to the north, meets the cooler air of the ocean, as well as that which flows down from the

poles, and thus forms the rain by which the seaboard is supplied. To water, however, the central lands both of our own continent and of the Eastern hemisphere, another device is necessary. There, the layer of atmosphere which rests on the earth becomes heated far beyond that of the seaboard, by the vast expanses of the sun-baked plains which there is no sea to relieve; while, on the other hand, an excess of rain is necessary, to supply those immense rivers, without which the country cannot be irrigated. This object is effected by means at once simple and grand. The philosopher has but lately noticed that nothing seems better to condense a current of humid air than an elevated plain. The wind strikes the foot of such a plain, and mounts the ascent until it comes in contact with the higher and cooler layers. This produces a rapid condensation, the results of which are seen in the rivers which pour down the side of the declivity which the winds strike. To use the language of Guyot: —

> "The mountain chains are the great condensers, placed by nature here and there along the continents, to rob the winds of their treasures, to serve as reservoirs for the rain-waters, and to distribute them afterwards, as they are needed, over the surrounding plains. Their wet and cloudy summits seem to be untiringly occupied with this important work. From their sides flow numberless torrents and rivers, carrying in all directions wealth and life."

It is to this process that we owe the magnificent rivers that water what would otherwise be the arid valleys of the Mississippi and Missouri. The trade-winds from the Atlantic and the Gulf of Mexico — the easternmost of them only partially arrested by the Alleghanies, the southern not at all — strike the eastern slope of the Rocky Mountains. There the great process of condensation commences. There, from the mountain showers, gush forth the Northern Mississippi, the Missouri, the Yellowstone, the Platte, the Arkansas, the Red River, and the Rio Grande. But here the work stops. Before the trade-winds reach the summit, their moisture is exhausted. No more rain falls, because no more moisture is condensed. It is not until the western descent of these great plains presents itself to the breezes which arise from the tropical Pacific, that rain begins again to fall. It falls there, it is true, but lightly, — for the southwestern winds are much less fully freighted with moisture than the southeastern, — yet in sufficient quantity to supply the comparatively moderate requirements of the narrow Pacific coast, and to fill the sources of the only two rivers by which the coast is traversed, the Columbia and the Colorado. It leaves, however, between the western and eastern slopes, the vast area of rainless tableland which we recognize as the great plains.*

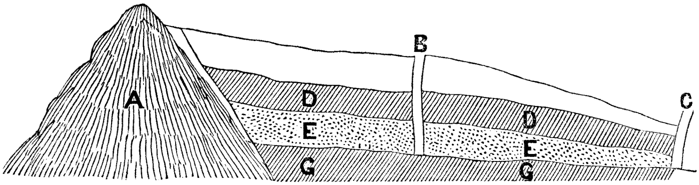
That the great plains, without some method of watering, must remain incapable of agriculture, is clear. Even Colonel Benton, whose indomitable will would have made him one of the last to surrender a project so dearly cherished as that of continuous American civilization, tells us that the country "must be helped out by wells as soon as settled." The only well by which substantial aid can be afforded, is the Artesian; and it is this agency, indeed, which is looked forward to by many very intelligent men as the means by which the plains are to be brought under cultivation.

---

* In McCosh and Dickie on Creation, the general beneficence of such an arrangement is thus treated. "In the New World, the chain of the Andes — its great back-bone — is situated not far from its western border; to the east of this vast range are extensive plains, with interspersed secondary mountain-ranges; and this peculiarity of conformation has a most important and necessary relation to its climatic peculiarities. The trade-winds from the Atlantic, in their progress, first reach the eastern slope, where the secondary chains of mountains condense part of the moisture in refreshing showers; and finally, coming in contact with the great and elevated principal ranges, the air is robbed of most of the vapor which remains. Hence, a continual flow of water down the eastern slope, clothing that fertile region with the richest vegetation, and giving it the largest river systems in the world. A necessary result of this influence exerted on the moist trade-wind in its progress to the west is, that, by the time it reaches the western side of the Andes, nearly all its moisture has been lost, and a line of coast on the Pacific presents the character of an arid desert. The extent, however, of this region of drought is very small, compared with that which profits at its expense. The advantage derived from the arrangement on the one side of the Andes far more than compensates for the disadvantage, and then this latter is still farther lessened by local peculiarities; for the Chilian desert would have presented greater latitudinal extent if the Cordilleras toward the north had been higher, and the continent of greater breadth.

"Imagine a different arrangement of surface; the great mountain chains, for example, transferred to the eastern, instead of occupying the western side; the consequence would have been that the Atlantic trade-wind must have had its progress arrested, and its vapor condensed, at a comparatively early part of its course; the ocean, giving up a portion of its waters to the passing wind, would have received them back again at no great distance in space, and after a short lapse of time; no extensive river systems could have possibly existed as at present; in a word, the whole influence of the genial wind would have been far more extensive, and the change in the land surface, and the resulting effect in climatic peculiarity, would have resulted in a very different distribution of organic forms, — would have given rise to new features in the zones of animal and vegetable life, and changed the habitations of man, and the relations of one part of mankind to another."

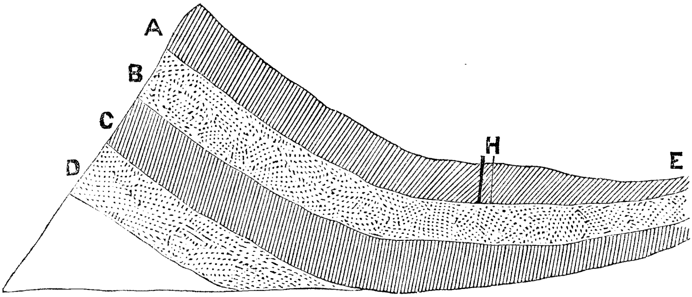
There are, however, one or two practical difficulties in the way of the opening of such water-sources. Artesian fountains, it is now well understood, are drawn from the reservoirs of rain-water collected in those vast, but irregular, stone cisterns, which are formed, in stratified countries, by the superposition of beds of rock intermingled with layers of gravel or sand. Thus, let us suppose that the rain, descending the eastern slope of the mountain, A, insinuates itself into the fissure between A and the edges of the strata D, E, and G, which we may assume, as is not unfrequently the case, to have been tilted upward against the sides of the mountain, A. Now, in the ordinary alternation of tertiary stratification, the water will trickle by the rocky layer, D, and will percolate into the bed of sand or gravel, E. This bed it will gradually fill, first by virtue of its own gravity, and then by the pressure of its weight in the upper portions which it already saturates. But it will not stop here. If its direct downward course is arrested by a second impermeable layer, it passes that, and drops into the layer of sand or gravel which is next beneath. Those who have noticed, in railway cuts, how eight or ten layers of soft and of hard material often alternate, and how, when these layers crop downwards, the softer of them continue to trickle with water for months after they are opened, though in this case the reservoir is comparatively small, will readily understand how it is, not only that immense water-courses may be thus opened from these subterranean river-beds, but that, in piercing the earth downward, there may be



as many distinct fountains as there are strata. The first of these truths is illustrated by the fountain of Vaucluse, which issues forth quite a little river of its own, emitting on an average 9,360 cubic feet per minute, or 5,030,000,000 cubic feet in the year. The second we find evidenced in the coal mines near St. Nicholas d'Aliermont, not far from Dieppe, where, in a perpendicular shaft, seven distinct sources were struck; the first between 80 and 100 feet from the surface, the second at 328 feet, the third from 570 to 590 feet, the fourth from 690 to 710 feet, the fifth at 820 feet, the sixth at 940 feet, and the seventh at 1,090 feet.

How the water is brought to the surface is readily seen. Two vertical perforations of the surface are made, the one at B and the other at C. As soon as that at B strikes the surface of the layer E, the water will gush upward, to a height which will be regulated by the height of water contained in the fissure by the side of the mountain, A, as well as by the extent of the grade by which the layer E has descended. When, however, the perforation at C reaches the layer E, the water will at once gush to the surface. There, the level of the surface of the soil is much below the upper surface of the reservoir from which the water is drawn. The consequence is, that a stream flows forth, whose capacity is limited only by the extent and tilt of the sand or gravel bed from which it issues.

A still more simple supply is found in cases where the strata crop upwards and uncover themselves by the side of a hilly slope.



Here the water drifts in by the exposed hill, and fills the reservoir B. There may be, we will suppose, an orifice at H, in which case the water will gush upwards to the height of B. Supposing, however, that the valley of which H is the centre begins to swell upward towards another hill, and that hence the layer B becomes again exposed at E, we have a natural spring, whose force will be regulated by the extent of the prior descent.

It will hence be seen that two elements are necessary to the supply of an Artesian well. The first of these is rain. Now as to this, so far as concerns the great central plains, there is a unanimity of opinion. Even Colonel Gilpin, the most sanguine of the explorers, declares them to be "rainless." Colonel Fremont gives several very vivid illustrations of this. Thus, on July 13th, 1842, when on a plateau which we should suppose of all others the most likely to be watered, — that between the North and South forks of the Platte, — and in a country seamed by fissures, into which the water would percolate if the two conditions of rain and reservoir were supplied, he declares, speaking of a particular ridge: —

> "At the foot of the northern slope was the bed of a creek, some forty feet wide, coming, by frequent falls, from the bench above. It was shut in by high perpendicular banks, in which were strata of white laminated marl. *Its bed was perfectly dry, and the leading feature of the whole region is one of remarkable aridity, and perfect freedom from moisture.* . . . . . We had suffered much to-day, both men and horses, for want of water, having met with it but once in our uninterrupted march of forty miles."

If here, where rains were not unfrequent, such aridity could take place, how much more irremediable would be the evil on the great rainless plains of the Southwest!

So far as concerns the stratification of the plains, the information at our command is not sufficient to enable us to speak. We must look forward, for more definite statistics, to the results of the exploration now recommenced under the auspices of Lieutenant Warren.

2. *The inadequacy of the soil* renders the compact settlement of the Bad Lands still more doubtful. The result which scientific observation has here reached, has been sustained by the practical experience of emigrants. They agree in saying

that, even where the land is not a mass of volcanic deposit, it presents, with rare exceptions, no soil which the agriculturist can till. The chief of the exceptions is the narrow but most beautiful valley of the Yellowstone, where indeed the land is as fertile as the scenery is wild and lovely. But beyond this and the valley of the Upper Missouri, the highest degree of productiveness of which the soil is usually capable is represented by a short though wide-spread grass. "Agricultural settlements," says Lieutenant Warren, "have now nearly reached their western limits on our great plains; the tracts beyond must ever be occupied by a pastoral people, whether savage or civilized." The causes of a portion at least of this devastation, Colonel Fremont traces to the great evaporation on the sandy surface; and the saline efflorescences, which whiten the ground, and shine like lakes reflecting the sun, make the soil wholly unfit for cultivation. The effect of this want of verdure, which is in some regions so great as to prevent even the buffalo from finding sustenance, is painfully exhibited in the condition of the resident tribes. "They are miserably poor," we are told by the same authority, "armed only with bows and arrows, or clubs; and, as the country they inhabit is almost destitute of game, they have no means of obtaining better arms. Roots, seeds, and grass, every vegetable that affords any nourishment, and every living animal thing, insect or worm, they eat. Nearly approaching to the lower animal creation, their sole employment is to obtain food; and they are constantly occupied in a struggle to support existence."

That a great civilized, pastoral community can be raised on the better portion, at least, of these plains, is maintained with much ingenuity in a very interesting recent letter from Colonel W. Gilpin, from which the following extracts are taken: —

> "The pastoral characteristics, being novel to our people, need a minute explanation. In traversing the continent from the Atlantic beach to the South Pass, the point of greatest altitude and remoteness from the sea, we cross successively the timbered region of soft soil and long annual grasses, and finally the great plains. The first two are irrigated by the rains coming from the sea, and are *arable;* the last is rainless, of a compact soil, resisting the plough, and is therefore *pastoral.*

The herbage is peculiarly adapted to the climate and the dryness of the soil and atmosphere, and is perennial. It is edible and nutritious throughout the year. This is the 'gramma' or 'buffalo-grass.' It covers the ground one inch in height, has the appearance of a delicate moss, and its leaf has the fineness and spiral texture of a negro's hair. During the melting of the snows in the immense mountain masses at the back of the great plains, the rivers swell like the Nile, and yield a copious evaporation of their long sinuous courses across the plains; storm-clouds gather on the summits, roll down the mountain flanks, and discharge themselves in vernal showers. During this temporary prevalence of moist atmosphere, these delicate grasses grow, seed in the root, and *are cured into hay upon the ground* by the gradually returning drought. It is this longitudinal belt of perennial pasture upon which the buffalo finds his *winter food,* dwelling upon it without regard to latitude; and here are the infinite herds of *aboriginal* cattle peculiar to North America, — wild horses, elk, antelope, white and black-tailed deer, mountain sheep, the grizzly bear, wolves, the hare, badger, porcupine, and smaller animals innumerable. The aggregate number of cattle, by calculation from sound data, exceeds one hundred million. No annual fires ever sweep over the great plains; they are confined to the prairie regions. . . . . .

"The pastoral region is longitudinal. The bulk of it is under the temperate zone, out of which it runs into the arctic zone on the north, and into the tropical zone on the south. The parallel Atlantic and arable region flanks it on the east, that of the Pacific on the west. The great plains, then, at once separate and bind together these flanks, rounding out both the variety and compactness of arrangement in the elementary details of society, which enable a continent to govern itself with the same ease as a single city.

"Assuming, then, that the advancing column of progress, having reached and established itself in force all along the eastern front of the great plains, from Louisiana to Minnesota, — having jumped over and flanked them also to occupy California and Oregon, — assuming that this column is about to debouch upon them to the front, and occupy them with the embodied impulse of our thirty millions of population, heretofore scattered upon the flanks, but now converging into phalanx upon the centre, some reflection, legitimately made, may cheer the timid, and confirm those who hesitate from old opinion and the prejudice of adverse education.

"It is well established that six tenths of the food of the human family is, or ought to be, animal food, the result of pastoral agriculture. The cattle of the world consume eight times the food per head, as compared with the human family. Meat, milk, butter, cheese, poultry, eggs, wool, leather, and honey, are the productions of pastoral agriculture. Fish is the spontaneous production of the water. Nine tenths of the labor of arable culture is expended to produce the grain and grasses that sustain the present supplies to the world of the above enumerated articles of the pastoral order. If, then, a country can be found where pastoral produce is spontaneously sustained by nature, as fish in the ocean, it is manifest that arable labor, being reduced to the production of bread-food only, may condense itself to a very small percentage of its present volume, and the cultivated ground be greatly reduced in acres.

"At present the pastoral culture of the American people results exclusively from the plough, and this is its amount: —

| | |
|---|---|
| Cattle of all kinds, | 18,378,907 |
| Horses and mules, | 4,896,050 |
| Sheep, | 21,722,220 |
| Swine, | 30,334,213 |
| Value, | $ 655,883,658. |

"It is probable that the aggregate *aboriginal* stock of the great plains still exceeds in amount the above table. It is all spontaneously supported by nature, as are the fish of the sea. Every kind of our domestic animals flourishes upon the great plains equally well with the wild ones. Three tame animals may be substituted for every wild one, and vast territories reoccupied, from which the wild stock has been exterminated by indiscriminate slaughter and the increase of wolves.

"The American people are about, then, to inaugurate a new and immense order of industrial production, — PASTORAL AGRICULTURE. Its fields will be the great plains intermediate between the oceans. Once commenced, it will develop very rapidly. We trace in their history the successive inauguration and systematic growth of several of these distinct orders. The tobacco culture, the rice culture, the cotton culture, the immense provision culture of cereals and meats, leather and wool, the gold culture, navigation external and internal, transportation by land and water, the hemp culture, the fisheries, the manufactures.

"Each of these has arisen as time has ripened the necessity for each, and noiselessly taken and filled its appropriate place in the general economy of our industrial empire.

"This pastoral property transports itself on the hoof, and finds its food ready furnished by nature. In these elevated countries, fresh meats become the preferable food for man, to the exclusion of bread, vegetables, and salted articles. The atmosphere of the great plains is perpetually brilliant with sunshine, — tonic, healthy, and inspiring to the temper. It corresponds with and surpasses the historic climate of Syria and Arabia, from whence we inherit all that is ethereal and refined in our system of civilization, — our religion, our sciences, our alphabet, our numerals, our written languages, our articles of food, our learning, and our system of social manners."

Supposing, however, that with central Nebraska and Kanzas civilization outside of the river-bottoms must cease, the question arises, What effect will this important fact have on these young territories themselves, as well as on the country at large?

Nebraska and Kanzas will, in that case, be the shores at which will terminate a vast ocean-desert, nearly one thousand miles in breath. To the west of that desert lie California and Oregon, great producing, and yet not capable of becoming great manufacturing countries; the former containing the finer, but not the coarser metals, together with breadstuffs abundant for her own support; the latter eminent for her wheat-growths, her fisheries, and her lumber. But in neither California nor Oregon is to be found the coal capable of working, nor the iron for framing, those great machines by which the wool of a country can be turned into its clothing, — by which the hides of the millions of cattle that range the prairies can be used for the shoes and the furniture of the nations on either side, — by which the buttons can be turned and the nails cut. On the other hand, on the eastern coast of this great desert sea will lie Kanzas and Nebraska, of all countries the best suited for the sites of vast manufactories. There run rivers whose descents and whose copiousness adapt them as well to turn the wheel as to irrigate the land. There, underneath a soil which can support a million of workmen, are spread layers of coal which will form the fuel for tens of thousands of square miles. There is the iron which is to form both the engine and the staple, — the arm that strikes, as well as the material that is struck. There, in fact, are the great furnishing ware-rooms, where the people of California will exchange their gold and quicksilver, and those of Oregon their fish and lumber, for the hardware, the clothes, and the furniture which the manufactories of the Missouri Valley will produce. If this view be correct, the scene at one of these prairie seaports of the West will be not unlike that at one of our ocean-ports in the East. At the docks of the great cities which will then spring up on this shore of civilization, will arrive fleet after fleet of the future ships of the desert, each dashing on over its iron track to the destined port. There, on the levee at which these waves of sand will terminate, will be strewn the boxes containing, not only the gold of the Sacramento and of the San Joaquin, and the quicksilver of New Almaden, but the wines which are even now beginning to be drawn from the vineyards of Los Angeles, and cotton and sugar from the south of the Sierra Nevada. There will be found, in an abundance which New England herself can but rival, the dried and salted fish of the Columbia and the Willamette, and the furs which the Oregon hunting-grounds produce in such rare abundance. There will be seen warehouses and shops like those which, in New York and Philadelphia, collect for Western inspection the products of Europe and of New England. It will be cheaper for the Pacific merchant to come here and purchase, than it would be to visit the cities of the Atlantic. Manufacturers on the Kanzas River, on the Blue River, on the Osage, can sell heavy goods at least twenty per cent cheaper than manufacturers in Connecticut or Pennsylvania. Freight, amounting to five dollars to the hundred-weight, will be a sufficient protection to force the manufactories of the Missouri Valley at once into energetic action. The time will come when the Western merchant, who leaves California by the cars to buy his stock at the East, will find in Topeka, in Nebraska City, in Lawrence, warehouses which will unite the products of the Atlantic States and of Europe with the goods which the abundance of breadstuffs, the proximity of the raw material, and the relief from the burden of freight which bears so heavily on transportation across the Alleghanies, will enable the factories of Kanzas and Nebraska to present on the spot, to the exclusion of Eastern competitors.

In the people of the great plains, the markets of Kanzas and Nebraska will not find purchasers alone. Those plains, desert-like as they may be, are dotted with islands of great beauty and richness. Even in the sterile wastes intervening between the South Fork of the Platte and the Arkansas, these frequently occur; "little valleys," as they are called by Colonel Fremont, "with pure crystal water, here leaping swiftly along, and there losing itself in the sands; green spots of luxurious grass, flowers of all colors, and timber of different kinds." * Sometimes these valleys spread themselves into extensive territories, of one of which, on the westernmost slope of the Rocky Mountains, the same explorer tells us, that it is twenty miles in diameter, "covered with a rich soil, abundantly watered, and surrounded by high and well-timbered mountains, — a place where a farmer would delight to establish himself, if he were content to live in the seclusion which it imposes." † Sometimes the arable land is distributed in zones, like that which surrounds the Salt Lake. Not unlike the ocean, this vast sweep of desert is broken by islands that are themselves continents in extent and variety of produce, as well as by islands that are mere specks of rock and sand. It will be to the first coast that checks the waves of sand by which these islands are girt, — in other words, it will be to the prairie-banks of Nebraska and Kanzas, — that this insular commerce of the desert will tend.

There is one other view, however, which is calculated still more to enhance the importance of this frontier of our East-American mainland. When the time comes for the inland transportation of the goods of China and India from the Pacific to the Atlantic, it will be found that there is one route whose cheapness, at least for heavy goods, will enable it to outbid all competitors. The Pacific shores, unlike those of the more sociable and restless Atlantic, rise up in uniform and dignified seclusion from the approaches of the sea. The coast of the Atlantic is perforated by bays and seamed by rivers. There is scarcely an area of ten miles square, east of the Rocky Mountains, which does not send its

---

* Exploring Report, p. 113.

† Ibid., p. 178.

tributary to the Atlantic. Far different is the case with the western slope of North America. South of the Columbia River, two ranges of mountains rear their heads, the westernmost of which approaches so closely to the sea as to leave no room for a river of any length to strike inland. The rivers which run into the Bay of San Francisco traverse merely the coast. But the Columbia River, as if for the very purpose of affording an avenue for inland trade, while it forms one vast and navigable stream from the ocean to the centre of the Oregon plain, flares out at the latter point into three forks, each of which offers a pass, and the only passes here accessible, through the Rocky Mountains. It is the Columbia alone that breaks through the mountains of the Cascade and Sierra Nevada; it is the Columbia alone that holds the keys to the passes of the mountains, from which, on the easternmost side, run the tributaries of the Platte. The forks of the Columbia will, therefore, have on one side of them the only navigable waters leading to the Pacific, and on the other the only highways through whose mountain-gates the locomotive can course on its way to the Missouri Valley. That the Platte and the Kanzas are incapable of navigation, we think is now abundantly proved; but it is equally clear, that the valleys through which they run are the natural courses through which the canal must be opened and the railway laid. Thus there will pour into the great depôts which these frontier States will present, not only the products of Eastern and Western America, but those of China and India.

To these considerations is to be added the fact, that the corn and wheat prairies of Nebraska, Iowa, and Kanzas stand on the banks of that great river, which, with a volume, a force, and through an extent of territory no other stream can equal, shoots down the freight committed to it on the vast corn-consuming plains of the Southern Mississippi. It is as if the staple and the producer were placed at the top of a great natural inclined plane, and the consumer at the bottom. Never was there such an avenue for such a freight. For five hundred miles these magnificent prairies slope upward from the river-banks. For one thousand miles the river dashes down with a velocity which enables even the slower class of steamboats to make the descent in from fifteen to twenty miles an hour. It is here that the Missouri has a great advantage over the Mississippi. The prairie country is scarcely reached by the latter river, so far as continuous navigation is concerned. The rapids at Keokuk interpose a serious barrier to the continuous shipment of freight from any but the south-east corner of Iowa and the southern lobe of Illinois. Were it not for this, the shallows above Dubuque interpose still greater difficulties in the way of the produce of Wisconsin and of Minnesota. The navigation of the Missouri, on the other hand, continues nearly one thousand miles beyond where that of the Mississippi stops. Where the languid waters of the latter have scarcely force enough to propel, or depth enough to float, a raft, the powerful current of the former enables the heaviest boats to double their speed. It is on account of the cheapness and rapidity which transportation in such a channel gives, that we think that the market of the Gulf country will be supplied from the valley of the Missouri, not from that of the Mississippi.

The character of the soil in the vast territories watered by the Missouri cannot be understood, without taking in view the geological as well as the riparian formation. Originally a great ocean swept through central North America, having for one of its shores the Rocky Mountains, and for the other the Alleghanies. As this ocean was contracted more and more, it left in its bottom a series of seams, the main one of which is now traversed by the Missouri. The bottom-lands, of which the base of this seam is composed, form a plain, extending in breadth from five to twenty-five miles, and accompanying the river through nearly its whole course. The flatness of this plain, and the very soft soil of which it is composed, may explain the fact that, of all streams, taking into account even those of the least pretensions, there is none whose evolutions are so capriciously eccentric as those of this giant and otherwise majestic river. It doubles and curves, for instance, to such an extent, around a line of a hundred miles between Leavenworth and Nebraska City, as to make that one hundred miles two hundred. It presents every possible aspect to the sun, and the sun every possible aspect to it. One moment we may be reposing serenely under the shade of an awning, in the confidence that, for a time at least, we are well sheltered from the tremendous blaze of noonday; the next moment the stream wheels round, and we find ourselves sitting prominently out in one great, unsheltered glare. What is popularly called the western bank is, by turns, the northern, the southern, and the eastern. It is this remarkable circuity of course that will cause the river travel to be superseded almost entirely by that of the car.

The secret of so capricious a course on the part of this, otherwise the most available river in the world, is easily told. The Missouri, with its impetuous current, swollen by the entire eastern drainage of the Rocky Mountains, leaps down, with a force which earth cannot resist, on the vast parallelogram two thousand miles in length which forms its basin. In its impetuous career, it strikes at one moment upon a majestic tree, tears it up by its roots, and dashes with it down stream; but soon it finds its burden too heavy or too large for anything but its deepest channel, and the tree is dropped upon the first shoal. Then comes a new formation. The mud which the river holds in such immense quantities, aided by the drift-wood with which the stream is filled, collects around the shoal in which the tree is imbedded. The shoal becomes a bar; and the river, finding it in the way, bounds off in the opposite direction, and cuts for itself a channel out of the soft bottom-land to which it retreats. This, however, leads to new spoliations, — new annexations of territory, which prove too powerful for their conqueror to carry, — new changes of channel, — and new curvings and curvettings in a course already wayward enough.

The effect of this on the bottom-lands is easily perceived. It makes them, as farms, more or less uncertain. Besides this, it utterly destroys their uniformity. Sometimes the river leaves all the bottom on one side of it, and forces itself on the other entirely up to the foot of the bluffs by which it is hedged in. Then we see from ten to twenty miles of bottom-land on one side, and nothing but bluff on the other. Sometimes it divides the bottom-land equally; sometimes it scallops each side, so as to furnish the bluffs each with an undulatory fringe-work of rich grass pasture or dark alluvial soil. But whatever may be its course, it leaves, on one side of it or the other, a rich bottom, which for immediate productiveness has probably no superior in the world. To this are added almost uniform belts of forest-trees, interposing themselves between the bottom and the bluff, which, along the States of Iowa and Missouri and the opposite shores, develop themselves in great beauty, variety, and grandeur. These trees, in connection with the stone with which the bluffs are often filled, give building materials to the settler in the richest abundance.

In Nebraska, the fertile bottom-lands on the Missouri River, according to the topographical survey of Lieutenant Warren, begin near the mouth of the Vermilion River, on the ninety-seventh meridian, about fifty miles from Sioux City, and about one thousand miles on the river course from the Mississippi. There, the trees on the river-bottom, which in Missouri and Kanzas are so immense and luxuriant, and which as we proceed north have been gradually thinning, shrink into a narrow belt, "varying," as we are told by the same accurate observer, "from a single tree to groves half a mile in width, alternating on either side, or occupying a few of the larger islands." The river at Sioux City forks into two branches, the main one of which, retaining the parent name, pursues a westwardly course, while the lesser, under the name of the Big Sioux, continues the prior course of the Missouri to the north. The bottom-lands, however, do not follow the course of the greater stream. Along the Missouri, west of the junction with the Sioux, they become narrow, and are so irregular and so subject to inundation as to give but an uncertain prospect of support. Nor, so far as can be learned from those who have tried the soil, are the table prairie-lands, which lie back from the bluffs, susceptible of much cultivation. The soil becomes thinner and thinner, and at last degenerates into a cold and desolate moor, on which no vegetation can live. The only exception is the mouth of the Eau-qui-court, which runs into the Missouri about sixty miles above the Big Sioux. Here there is a patch of very rich and fertile soil. So thin and poor, however, does the country now become, that Lieutenant Warren declares it as his opinion, that "no point above the Vermilion could be relied on, for many years to come, to raise corn for the support of a cavalry post; above this it must be transported." It would seem as if the rich valley of bottom-land which accompanied the Missouri thus far, had deserted Nebraska at this point, and, by ascending the Big Sioux, had become the sole property of Iowa.

The Platte River has undoubtedly great advantage, as being the natural highway over which emigration from the Atlantic to the Pacific is to pass.*

The valley of the Platte is sodded with firm and yet nutritious grass, which affords at the same time a road for the wagons and food for the oxen or mules by which the wagons are drawn. From its languid, though always accessible waters, the emigrant is able to draw a constant supply. It is, in fact, from this expansion and this shallowness that it derives its name. "*Ne*," river, and "*Braska*," shallow, is its Indian title, which it imparts to the territory; and its French and more popular name, "Platte," signifies the same thing. About at its centre, it divides into two forks. The first of these springs from the Rocky Mountains, in latitude 42°, and under the name of the Sweet Water drains what are now

---

* The following table exhibits the statistical merits of the several proposed routes.

| Routes. | Distance in straight line. | Distance by proposed railroad route. | Sum of ascents and descents. | Length of level route of equal working expense. | Comparative cost of different routes. | No. miles through arable land. | No. miles through uncultivable land, arable soil being in small areas. | No. square miles of sums of areas of largest bodies of arable land in uncultivable region. |
|---|---|---|---|---|---|---|---|---|
| | Miles. | Miles. | Feet. | Miles. | $ | | | |
| Near 47th and 49th parallel, from St. Paul to Seattles, | 1,410 | 2,025 | 19,100 | 2,387 | 140,871,000 | 535 | 1,490 | 1,000 |
| Near 41° and 42°, *via* South Pass from Council Bluffs, | 1,410 | 2,032 | 29,120 | 2,583 | 116,095,000 | 632 | 1,400 | 1,100 |
| Near 38th and 39th parallel, from Westport to San Francisco, | 1,740 | 2,080 | 49,986 | 3,125 | | 620 | 1,460 | 1,100 |
| Near 35th parallel, from Fort Smith to San Francisco, | 1,360 | 2,174 | 50,670 | 3,137 | 169,210,265 | 644 | 1,530 | 2,300 |

known as the Rattlesnake Peaks. The second proceeds from a more southwesterly point, and springs from the ridge of that great water-shed from which fall on the one side the waters that descend into the Pacific, and on the other those that supply the Gulf of Mexico. From the mouth of the Platte to its forks, according to Lieutenant Warren's survey, the bluffs are from two to five miles from the water, making an intermediate bottom valley of from four to ten miles. The lowness of the bottom, however, subjects it to periodical inundations, which, though transient and light, render permanent improvements impracticable.

The bottom-lands of the Platte cease in a great measure at the river forks. From that point to Fort Laramie, the bluffs come down to the water's edge, and consequently the road has to cross the highlands of the ridges. From the mouth to Fort Kearny, cotton-wood of excellent quality is to be found. Above and around the forks, cedar is seen in considerable quantity.

The width of the Platte is generally one mile; and when it is full, its depth is six feet throughout. This, however, is very rarely the case. This year an effort was made to open steamboat navigation on the first fifty miles above its mouth. The attempt is now given up; and the general opinion of those who have had much opportunity of observation coincides with that of Lieutenant Warren, that the Platte "is of no use for navigation, as the bed is so broad that the water seldom attains sufficient depth, and then the rise is of short duration."

The arable prairies that arise from the bluffs by which the Platte is hemmed, do not spread to any considerable extent, after the first hundred and fifty miles of its course are passed.

Even at the forks, the river becomes so low as sometimes, at its deepest parts, to be scarcely more than a foot in depth. Colonel Fremont, who passed it on August 27, 1842, a short distance below the forks, says:—

> "In many places, the large expanse of sands, with some occasional stunted trees on its banks, gave it the air of the sea-coast; the bed of the river being merely a succession of sandbars, among which the channel was divided into rivulets a few inches deep. We crossed and

re-crossed with our carts, repeatedly, and at our pleasure; and whenever an obstruction barred our way, in the shape of precipitous bluffs that came down upon the river, we turned directly into it, and made our way along the sandy bed, with no other inconvenience than the frequent quicksands, which greatly fatigued our animals."

Of the difficulties attending the navigation of the Platte at the confluence with the Sweet Water, the same explorer gives the following graphic sketch.

"In obedience to my instructions to survey the river Platte, if possible, I had determined to make an attempt at this place. The India-rubber boat was filled with air, placed in the water, and loaded with what was necessary for our operations; and I embarked with Mr. Preuss and a party of men. When we had dragged our boat for a mile or two over the sands, I abandoned the impossible undertaking, and waited for the arrival of the party, when we packed up our boat and equipage, and at 9 o'clock were again moving along on our land-journey. We continued along the valley on the right bank of the Sweet Water, where the formation, as already described, consists of a grayish micaceous sandstone, and fine-grained conglomerate and marl. We passed over a ridge which borders or constitutes the river hills of the Platte, consisting of huge blocks, sixty or eighty feet cube, of decomposing granite. The cement which united them was probably of easier decomposition, and has disappeared and left them isolate, and separated by small spaces. Numerous horns of the mountain goat were lying among the rocks; and in the ravines were cedars, whose trunks were of extraordinary size. From this ridge we descended to a small open plain at the mouth of the Sweet Water, which rushed with a rapid current into the Platte, here flowing along in a broad, tranquil, and apparently deep stream, which seemed, from its turbid appearance, to be considerably swollen. I obtained here some astronomical observations, and the afternoon was spent in getting our boat ready for navigation the next day.

"*August* 24.—We started before sunrise, intending to breakfast at Goat Island. I had directed the land party, in charge of Bernier, to proceed to this place, where they were to remain, should they find no note to apprise them of our having passed. In the event of receiving this information, they were to continue their route, passing by certain places which had been designated. Mr. Preuss had accompanied me, and with us were five of my best men, viz. C. Lambert, Basil Lajeunesse, Honoré Ayot, Benoist, and Descoteaux. Here appeared no scarcity of water, and we took on board, with various instruments and baggage, provisions for ten or twelve days. We paddled down the river rapidly, for our little craft was light as a duck on the water; and the sun had been some time risen, when we heard before us a hollow roar, which we supposed to be that of a fall, of which we had heard a vague rumor, but whose exact locality no one had been able to describe to us. We were approaching a ridge, through which the river passes by a place called 'cañon' (pronounced *kanyon*), a Spanish word signifying a piece of artillery, the barrel of a gun, or any kind of a tube, and which, in this country, has been adopted to describe the passage of a river between perpendicular rocks of great height, which frequently approach each other so closely overhead as to form a kind of tunnel over the stream, which foams along below, half choked up by fallen fragments. Between the mouth of the Sweet Water and Goat Island there is probably a fall of 300 feet, and that was principally made in the cañons before us, as without them the water was comparatively smooth. As we neared the ridge, the river made a sudden turn, and swept squarely down against one of the walls of the cañon with a great velocity, and so steep a descent, that it had, to the eye, the appearance of an inclined plane. When we launched into this, the men jumped overboard to check the velocity of the boat, but were soon in water up to their necks, and our boat ran on; but we succeeded in bringing her to a small point of rocks on the right, at the mouth of the cañon. Here was a kind of elevated sand beach, not many yards square, backed by the rocks, and around the point the river swept at a right angle. Trunks of trees, deposited on jutting points 20 or 30 feet above, and other marks, showed that the water here frequently rose to a considerable height. The ridge was of the same decomposing granite already mentioned, and the water had worked the surface in many places into a wavy surface of ridges and holes. We ascended the rocks to reconnoitre the ground; and from the summit the passage appeared to be a continued cataract, foaming over many obstructions, and broken by a number of small falls. We saw nowhere a fall answering to that which had been described to us as having 20 or 25 feet; but still concluded this to be the place in question, as, in the season of floods, the rush of this river against the wall would produce a great rise, and the waters, reflected squarely off, would descend through the passage in a sheet of foam, having every appearance of a large fall. Eighteen years previous to this time, as I have subsequently learned from himself, Mr. Fitzpatrick, somewhere above on this river, had embarked with a valuable cargo of beaver. Unacquainted with the stream, which he believed would conduct him safely to the Missouri, he came unexpectedly into this cañon, where he was wrecked, with the total loss of his furs. It would have been a work of great time and labor to pack our baggage across the ridge, and I determined to run the cañon. We all again embarked, and at first attempted to check the way of the boat; but the water swept through with so much violence that we narrowly escaped being swamped, and were obliged to let her go in the full force of the current, and trust to the skill of the boatmen. The dangerous places in this cañon were where huge rocks had fallen from above, and hemmed in the already narrow pass of the river to an open space of three or four and five feet. These obstructions raised the water considerably above, which was sometimes precipitated over in a fall, and at other places, where this dam was too high, rushed through the contracted opening with tremendous violence. Had our boat been made of wood, in passing the narrows she would have been staved; but her elasticity preserved her unhurt from every shock, and she seemed fairly to leap over the falls."

The region south of the Platte presents a much wider sweep for agricultural enterprise. The Blue River, which falls into the Kanzas about fifty miles west of Topeka, permeates and fructifies with its tributaries almost the whole of the prairie level included between the Platte, the Missouri, and the northern fork of the Kanzas. Here a climate not yet infected by the parching heats of the country below, is united with a soil of eminent fruitfulness. The arable land begins here to widen, and to enclose one of the loveliest regions that the world knows. In rapid succession follow one another the valleys of the Blue River, of the Osage, of the Kanzas, of the Neosho, and of the Upper Arkansas. But even with these aids, the arable soil does not extend on an average farther than from one hundred and fifty to two hundred miles from the river-banks.

The general character of the bottom-lands, not only of the Missouri, but of the Kanzas, the Yellowstone, and the Platte, is of sand and clay, richly impregnated and saturated with carbon, and with the vast quantities of decayed vegetable matter which the rivers are constantly precipitating. Not unusually, corn, to the amount of one hundred and fifty bushels to the acre, is here produced, with scarcely any more preparation than the turning of a soil which is already so soft and pliable as to require only the ordinary plough-work. From this, which forms, more strictly speaking, the river-basin, there rises not unfrequently a second or subsidiary bottom, at an average height of fifty feet from the river level, and sloping back to the bluff-heights which form the base of the inland prairies. Ordinarily, therefore, the river-banks arise in three terraces; — first, that of their own bottom; secondly, that of the middle slope; and thirdly, that of the bluff-heights, from which sweep away, sometimes in even plain, sometimes in billowy swells, the prairies themselves. These prairies, however, have their own distinctive undulations. The ridge, or water-shed, which divides two rivers or water-courses, and which is hence called the "Divide," forms very often a level road for miles. It would seem as if, when the waters which once covered this vast region subsided, they first receded from this ridge or *divide*, and, in dropping down its sides, opened at almost equal distances seams or ravines, which are now traversed, sometimes by rivulets; sometimes by sloughs or mud-pools, which continue to ooze along until the spring which supplies them is absorbed; and sometimes by mere wind-gaps. It is these troughs, almost always equal in their depression and their diameter, and generally covered with the richest verdure, that give to the prairies of the Missouri Valley a peculiar billowy beauty.

Of the agricultural qualities of the prairie soil, it is not necessary to speak. Undoubtedly, taking its permanency, its depth, its richness, and its extent into consideration, it can find nothing in the world to equal it. The great difficulty is the toughness of the vegetable canvas by which it is covered. For centuries, the long and strong threads of the grass-root have been knitted to and fro, until at last they have become a fabric, the tenacity of which no loom can rival. For centuries, birds have rendered their aid to complete the work, by dropping down seeds of an infinite variety of stunted but thick-set little plants, that clinch and rasp the sod above and beneath. For centuries, fires have periodically blazed over the whole surface, forcing vegetation, in very self-defence, to betake itself to underground work, where its enemy cannot reach it, building, or rather packing itself away, in cellars, two or three stories deep.

It is not here that the gopher, whose exploratory energies so often help the plough in the damper lands of the bottom, excavates its catacombs. That indefatigable little miner shrinks from the tough roots below, and the conflagrations above, which mark the prairie levels, and takes up his abode mainly beneath the shadow of the bluffs. Hence it is that the work of breaking up this toughest of soils has difficulties which the Eastern farmer can hardly comprehend. In Nebraska and Kanzas, as many as six or eight yoke of oxen will be seen engaged at a single plough. Rarely is the work undertaken with less than four yoke. When once upturned, however, the sod rots in the course of a summer. After this, it may be ploughed by a single yoke. Corn and potatoes grow on it after the first ploughing ; wheat not until after the second.

The toughness of the prairie sod may form some test of its age. Mr. Schoolcraft tells us, that it is "more permanent in its qualities than even the firmest sandstones and limestones of the West, the latter of which are known to crumble and waste away under the combined influences of rain, frost, and other atmospheric phenomena of the climate." We have, however, a more accurate method of measurement. In 1827, an oak-tree was cut down, whose roots interpenetrated the sod which lay over one of those ancient mounds by which this section of country is marked. The tree measured thirty-eight inches in diameter at the height of twenty-six inches above the ground, which gave three hundred and twenty-five cortical layers, indicating an age of three hundred and twenty-five years. One century, therefore, before the French entered the St. Lawrence, one century and a quarter before the Puritans landed at Plymouth Rock, the prairie-grass was busy in knitting this ancient garment for the preservation of the still more ancient aboriginal monuments beneath.

To the same era the present formation of prairies may at least in part be referred. Mr. Schoolcraft, in his great work, gives us a series of plates representing the outlines of some of the more remarkable of those ancient farms, of which the prairies in the Missouri Valley show indications that may be clearly traced. The fields of which these farms consist are, in most cases, covered by the sod of which mention has just been made, which carries their origin back for a period certainly exceeding three hundred years. They are to be found in the richest and best-watered sections, and extend from one to three hundred acres each in area. The elaborate nicety with which these fields are laid out betrays a much higher degree of mechanical skill, and of agricultural care, than we find in the wandering tribes, which alone European enterprise has been able to discover on the North American continent. In one case, a parallelogram of a hundred acres is divided into four squares, separated from one another by neatly-defined walks. Each square is divided into a series of rows or beds, laid down with great accuracy and precision. " Nearly all the lines of each area or sub-area of beds," Mr. Schoolcraft tells us, " are rectangular and parallel. Others admit of half-circles, and variously-curved beds with avenues, and are differently grouped and disposed." To the fact that these beds, from the want of cattle capable of drawing the plough, were worked and cemented by the hand, year after year, is to be attributed the toughness which they gradually assumed, and which, under the covering of the prairie grass, has enabled them to withstand the passage of centuries.

We have, therefore, in these ancient fields and gardens, the cause of at least a portion of those wide sweeps of prairie by which the forest is uprooted as well as the valley smoothed. When, with an art more refined, though not more laborious, the gardens of Pompeii and Herculaneum were cut into their long alleys and their graceful curves, races now gone were moulding these gardens of the Missouri, which a vesture equally impervious with the lava of Vesuvius was to preserve for the inspection of ages to come.

> " A race, that long has passed away,
> Built them ; — a disciplined and populous race
> Heaped, with long toil, the earth, while yet the Greek
> Was hewing the Pentelicus to forms
> Of symmetry, and rearing on its rock
> The glittering Parthenon. These ample fields
> Nourished their harvests, here their herds were fed,
> When haply by their stalls the bison lowed,
> And bowed his maned shoulder to the yoke.
> The solitude of centuries untold

> Has settled where they dwelt. The prairie-wolf
> Hunts in their meadows, and his fresh-dug den
> Yawns by my path. The gopher mines the ground
> Where stood their swarming cities. All is gone, —
> All — save the piles of earth that hold their bones, —
> The platforms where they worshipped unknown gods, —
> The barriers which they builded from the soil
> To keep the foe at bay."

It is not unlikely, viewing the matter *a priori*, that such a race as those by which the mounds of the Missouri and Ohio Valleys were built should have left tracts of cleared ground, of which the more delicate and complex structure of the gardens just noticed would form but a small fraction. Should desolation, such as we might suppose to follow in the track of a barbarian foe, sweep over the Genesee Valley, and should the deserted fields of that most fertile tract be left to the approaches of the prairie-grass, it would require not a long course of years to cover the dark soil of the upturned turf with a beautiful, but tough carpet, whose texture would prevent a forest-growth. We should find similar plains open wherever the hand of the farmer had been busy in clearing the soil. The valley of the Connecticut River would glitter in the billowy verdure, at least as beautifully as that of the Des Moines. We may, by the same reasoning, be justified in concluding, that some portion, at least, of the prairie expanse was cleared by aboriginal culture.

But however this may be with the breaks which we find in the bosom of large forests, and with those artificial gardens in which the culture of the aboriginal husbandman may be specially traced, we must resort to the natural agencies of fire and water to explain the causes of that vast denudation by which the Missouri and Mississippi valleys are literally made bare. Fire is the Indian's harrow by which he tears up the *old* pasture; his manuring power by which he works in order to produce the *new*. Even in the month of July, when the spring grass has already become coarse and dry, the traveller will see, curling up in point after point on the horizon, the smoke which marks the process by which this cheap agriculture is carried on. In a few moments the prairie is covered with a reddish-brown crust. In a few days the tender green grass springs up. Here the cattle congregate, leaving the older and drier pasture. Here the buffalo, in wilder regions, collects in countless hosts, to meet that race with whose destinies he is bound by so subtile and indissoluble a link.

But this process, however salutary it may be to the short-lived and vivacious grass, is fatal to those majestic trees whose life is centuries. No sapling can survive a prairie-fire; and as there are few prairies on the table-lands which are not on fire at least once in every two or three years, there is no sapling thus exposed that is not destroyed before it becomes a tree. It is thus that, in the higher and drier sections of the country, the general bareness of the prairies is to be explained. The exception denotes the cause. Wherever there is a deep ravine, with sudden and bare banks, down which the flame cannot lick, there, especially when there is a slough at the bottom so as utterly to exclude invasion, the young trees take refuge.

The bareness of the valleys and river-bottoms can be accounted for on another principle. The excursive character of the streams on the Missouri Valley of itself produces no denudation. Besides this, there is the record on every hill of the gradual emergence of the bottom-lands, at least, from the waters of a vast inland lake. The level and bare soil which the retirement of such a lake would leave, may be well understood as forming the present river-bottom prairies.

In respect to forests, Southeastern Nebraska and Eastern Kanzas have a great advantage over Illinois and Iowa. In the latter States, we may travel for miles without seeing the fringe of a single tree rise over the clear line of the horizon. The country in many sections is bald of all growths higher than grass. It is not so on the central valley of the Missouri. The cottonwood spreads itself in wonderful beauty along the bottom-lands, and with it the silver-poplar and the willow raise their flexible forms. Above, on the bluffs, are to be found the oak, the elm, the cedar, and the black-walnut. For fuel and for fencing, as well as for building, therefore, there is an abundance of material on the spot.

With these points may be considered the climate. Between the Missouri Valley and the same range of latitude towards the east, the advantages, so far as evenness of temperature is concerned, are with the latter. Both in Kanzas and in Nebraska the thermometer ranges fifteen degrees higher in summer, and fifteen degrees lower in winter, than in Virginia and Pennsylvania. It is not uncommon for the mercury to sink to thirty degrees below zero in the one season, and to keep steady in the other, even as far north as Omaha City, at one hundred and ten. It is an error to seek the causes of these extremes in the as yet unsettled condition of the country. They result from the fact that, as we recede farther from the sea-coast, both heat and cold become in their degree greater. The reason is very simple. The ocean — from its comparative non-susceptibility to changes of temperature, from the readiness with which its layers, when overheated, give place to others that are cooler, and from its moisture — has a very sensible influence in retarding the processes of heating and cooling for the atmosphere lying upon it. This influence declines in proportion to our removal from its seat. To quote from Humboldt: —

> "The temperature is raised by the proximity of a western coast in the temperate zone; the divided configuration of a continent into peninsulas, with deeply-indented bays and inland seas; the prevalence of southerly or westerly winds; chains of mountains acting as protecting walls against winds coming from colder regions; the vicinity of an oceanic current; and the constant serenity of the sky in the summer months. It is lowered by elevation above the level of the sea, when not forming part of an extended plain; the compact configuration of a continent having no littoral curvatures or bays; the vicinity of isolated peaks; mountain chains, whose mural form and direction impede the access of warm winds; and a cloudy summer sky, which weakens the action of the solar rays."

Two features, however, tend greatly to soften these extremes. The winter is relieved by the crisp dryness of the air, as contrasted with the piercing sharpness of our seaboard. The summer, to those who can take refuge in the shade, has nearly all its terrors removed by the cool and powerful breezes by which the prairies are incessantly swept.

It is in these breezes, in fact, that resides one of the main charms of prairie life. In their uniformity, their bracing purity, their vigor, they rival those of the sea. They are greatly preferable in these respects to those that traverse our eastern Alleghany slopes. With us, the wind comes fractured into puffs, or slit into threads, by the forests, the narrow gorges, the mountain crags, and the deep ravines through which it passes. Its order, like that of a great army which has been forced to defile through a series of mountain-passes, is broken up; and it comes down upon us in squads and platoons, which, though brisk and energetic enough, lack at the same time the uniformity and steady march of a well-disciplined body. But the breezes of the prairies pass onward in one grand and unbroken sheet. They may not blow with the force of our occasional Eastern gusts, but they blow like the trade-winds, with an evenness and continuity which may be always relied on, and which, in summer at least, is as far from sinking at one time into a calm, as from rising at another into a hurricane. In winter the case is different, as the wind then covers the prairies with a cold and heavy weight, whose very uniformity aggravates its severity. But in the summer, the delicious coolness and the unfailing regularity of the prairie winds are blessings to which all travellers will bear a grateful testimony.

We have thus given a brief survey of the position and resources of the territory which, under the name of Nebraska and Kanzas, occupies no inconsiderable section of the west side of the Missouri Valley. From this survey, important conclusions follow. One of these is the damming up of the stream of American emigration at our present western frontier. Whether that stream is to fork northward or southward, — towards Canada or New Mexico, — whether, turned back upon its fountains, it is to fall eastward down on the islands of the Caribbean, — these are questions too momentous to be here discussed. One observation we may be permitted to hazard. If we have indeed reached our western inland frontier, it is a frontier well worthy of its destiny. Perhaps there is no more striking illustration of the wisdom of that Providence which presided over the formation of our country, than in the fact that emigration was first led to our eastern coast, rather than to the great valley of the Mississippi. Had the latter been first occupied, it is doubtful whether the rocks and lagoons of the sea-board would ever have been settled. No man would have turned from the prairie-sward to the seamed slopes of the Atlantic edge. As it is, we have the energy and patience which the difficult soil of the East generates, with that magnificent sweep of Western territory which, had it been opened to us first, might, from its very luxuriousness, have generated among those occupying it an ignoble love of ease.

---

ART. IV. — 1. *Les Parlements de France. Essai Historique.* Par le VICOMTE DE BASTARD. Paris: Didier. 2 vols. 8vo.
2. *Robert Emmett.* Paris: Michel Levy. 12mo.
3. *Mémoires de l'Impératrice Joséphine.* Paris: Firmin Didot. 2 vols. 8vo.
4. *Études sur Pascal.* Par VICTOR COUSIN. Paris: Didier. 8vo.
5. *Fragments et Souvenirs.* Par VICTOR COUSIN. Paris: Didier. 8vo.
6. *La Tribune Moderne. Vie de Châteaubriand.* Par M. VILLEMAIN. Paris: Michel Levy. 8vo.

IT seems a strange, and for that very reason it may not be an uninteresting study, to examine, at the very moment when France has almost ceased to have almost any liberties, what were the liberties she enjoyed from the thirteenth century up to the so-called great Revolution, and through the period when she was governed by what are usually denominated absolute, if not despotic monarchs.

When discussing, or in any way judging, the history of France, it is always necessary to separate her institutions from the manner in which they were administered, and from the men who administered them. It has been often remarked by statesmen, that nearly all institutions are in themselves good, and have failed only from the deficiencies of those in whose hands they were placed, and who had the duty of carrying them out. It is therefore, we think, somewhat a